```
   1 ggccggacag tccgccgagg tgctcggtgg agtcatggca gtgccctttg tggaagactg
  61 ggacttggtg caaaccctgg gagaaggtgc ctatggagaa gttcaacttg ctgtgaatag
 121 agtaactgaa gaagcagtcg cagtgaagat tgtagatatg aagcgtgccg tagactgtcc
 181 agaaaatatt aagaaagaga tctgtatcaa taaaatgcta aatcatgaaa atgtagtaaa
 241 attctatggt cacaggagag aaggcaatat ccaatattta tttctggagt actgtagtgg
 301 aggagagctt tttgacagaa tagagccaga cataggcatg cctgaaccag atgctcagag
 361 attcttccat caactcatgg caggggtggt ttatctgcat ggtattggaa taactcacag
 421 ggatattaaa ccagaaaatc ttctgttgga tgaaagggat aacctcaaaa tctcagactt
 481 tggcttggca acagtatttc ggtataataa tcgtgagcgt ttgttgaaca agatgtgtgg
 541 tactttacca tatgttgctc cagaacttct gaagagaaga gaatttcatg cagaaccagt
 601 tgatgtttgg tcctgtggaa tagtacttac tgcaatgctc gctggagaat tgccatggga
 661 ccaacccagt gacagctgtc aggagtattc tgactggaaa gaaaaaaaaa catacctcaa
 721 cccttggaaa aaaatcgatt ctgctcctct agctctgctg cataaaatct tagttgagaa
 781 tccatcagca agaattacca ttccagacat caaaaaagat agatggtaca acaaacccct
 841 caagaaaggg gcaaaaaggc cccgagtcac ttcaggtggt gtgtcagagt ctcccagtgg
 901 attttctaag cacattcaat ccaatttgga cttctctcca gtaaacagtg cttctagtga
 961 agaaaatgtg aagtactcca gttctcagcc agaaccccgc acaggtcttt ccttatggga
1021 taccagcccc tcatacattg ataaattggt acaagggatc agcttttccc agcccacatg
1081 tcctgatcat atgcttttga atagtcagtt acttggcacc ccaggatcct cacagaaccc
1141 ctggcagcgg ttggtcaaaa gaatgacacg attctttacc aaattggatg cagacaaatc
1201 ttatcaatgc ctgaaagaga cttgtgagaa gttgggctat caatggaaga aaagttgtat
1261 gaatcaggtt actatatcaa caactgatag gagaaacaat aaactcattt tcaaagtgaa
1321 tttgttagaa atggatgata aaatattggt tgacttccgg ctttctaagg gtgatggatt
1381 ggagttcaag agacacttcc tgaagattaa agggaagctg attgatattg tgagcagcca
1441 gaaggtttgg cttcctgcca catgatcgga ccatcggctc tggggaatcc tggtgaatat
1501 agtgctgcta tgttgacatt attcttccta gagaagatta tcctgtcctg caaactgcaa
1561 atagtagttc ctgaagtgtt cacttccctg tttatccaaa catcttccaa tttattttgt
1621 ttgttcggca tacaaataat acctatatct taattgtaag caaaactttg gggaaaggat
1681 gaatagaatt catttgatta tttcttcatg tgtgtttagt atctgaattt gaaactcatc
1741 tggtggaaac caagtttcag gggacatgag ttttccagct tttatacaca cgtatctcat
1801 ttttatcaaa acattttgtt t
```

FIG. 1

MAVPFVEDWDLVQTLGEGAYGEVQLAVNRVTEEAVAVKIVDMKR
AVDCPENIKKEICINKMLNHENVVKFYGHRREGNIQYLFLEYCS
GGELFDRIEPDIGMPEPDAQRFFHQLMAGVVYLHGIGITHRDIK
PENLLLDERDNLKISDFGLATVFRYNNRERLLNKMCGTLPYVAP
ELLKRREFHAEPVDVWSCGIVLTAMLAGELPWDQPSDSCQEYSD
WKEKKTYLNPWKKIDSAPLALLHKILVENPSARITIPDIKKDRW
YNKPLKKGAKRPRVTSGGVSESPSGFSKHIQSNLDFSPVNSASS
EENVKYSSSQPEPRTGLSLWDTSPSYIDKLVQGISFSQPTCPDH
MLLNSQLLGTPGSSQNPWQRLVKRMTRFFTKLDADKSYQCLKET
CEKLGYQWKKSCMNQVTISTTDRRNNKLIFKVNLLEMDDKILVD
FRLSKGDGLEFKRHFLKIKGKLIDIVSSQKVWLPAT

FIG. 2

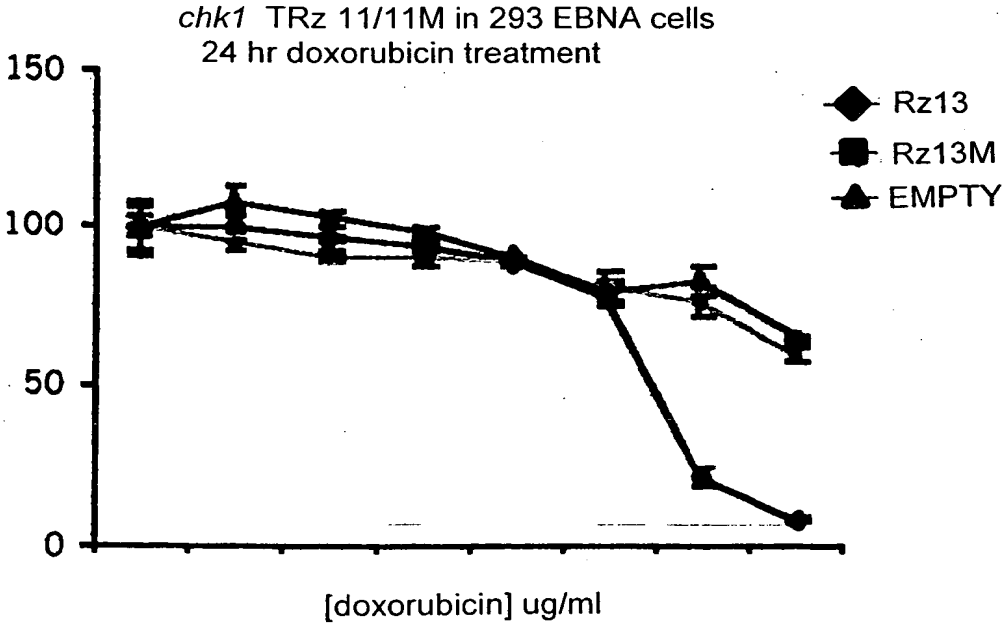

FIG. 5

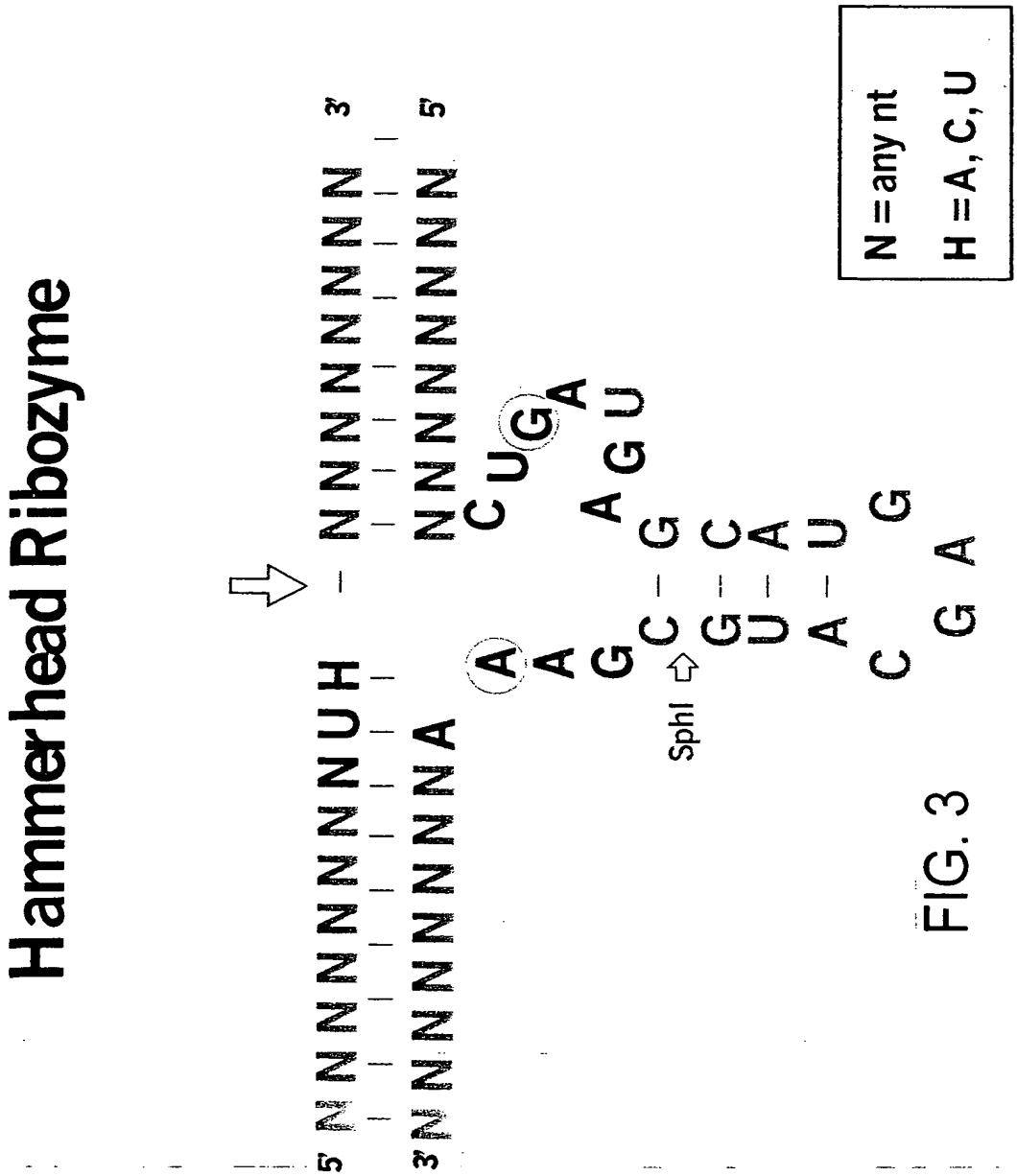
Hammerhead Ribozyme
5' NNNNNNNUH 3'
3' NNNNNNNA 5'
NNNNNNN
NNNNNNN
C U G A
A G U
G C
C G
A U
G C
A
A
G C
G U
A
C G
SphI
N = any nt
H = A, C, U

FIG. 3

FIG. 4A

FIG. 4B

FIG. 4

Computational prediction of *chk1* RNA secondary structure

x = AUU
4 = UUU
6 = CUU
7 = AUA
11 = UUA
12 = AUA
13 = GUU
14 = AUA

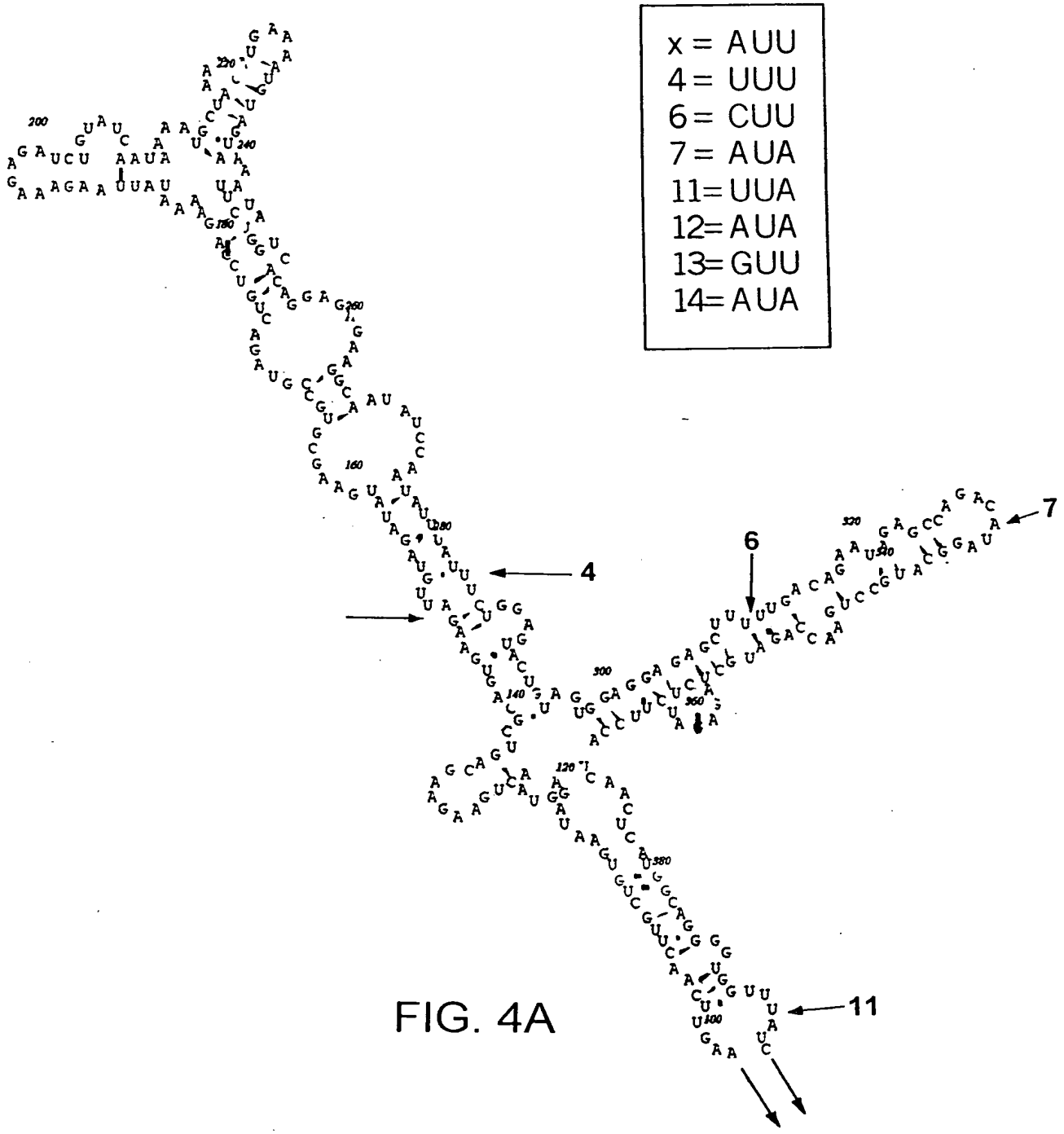

FIG. 4A

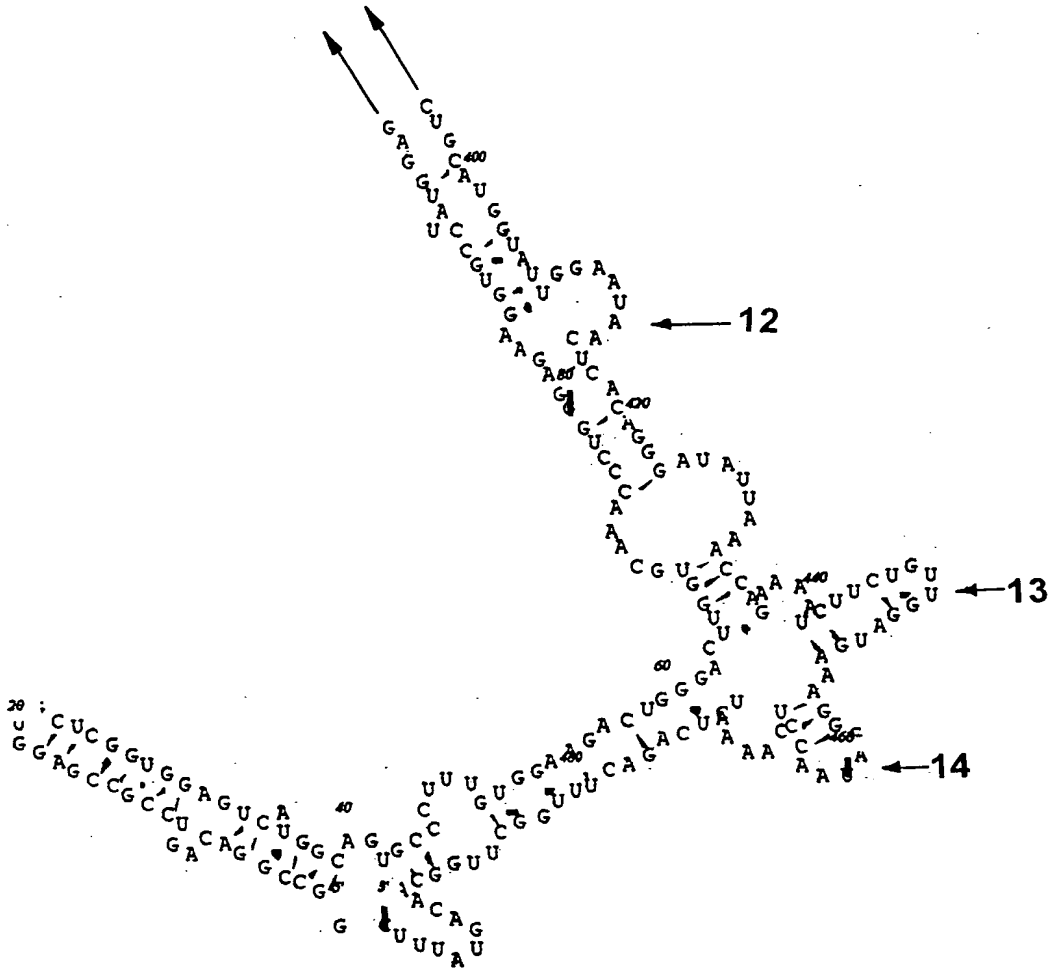

FIG. 4B